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**TESTIMONY RE: PROPOSED BILL NO.5219 AN ACT PROHIBITING THE USE OF
ELECTRONIC CIGARETTES IN SCHOOLS**

PUBLIC HEALTH COMMITTEE

February 23, 2015, 2014

Good Day, Senator Gerratana, Representative Ritter and esteemed members of the Public Health Committee.

Thank-you for the opportunity to provide testimony on behalf of the Connecticut Nurses' Association (CNA) related to **PROPOSED BILL NO. 5219 AN ACT PROHIBITING THE USE OF ELECTRONIC CIGARETTES IN SCHOOLS**

I am Mary Jane Williams Ph.D., RN current chairperson of Government Relations Committee for the Connecticut Nurses Association and professor emeritus from Central Connecticut State University.

I speak in strong support of **PROPOSED BILL NO. 65219 AN ACT PROHIBITING THE USE OF ELECTRONIC CIGARETTES IN SCHOOLS** banning electronic cigarettes in schools. We have the evidence related to the health effects of electronic cigarettes. Initially it was believed that E Cigarettes were safe and less toxic than Tobacco products. The research that is evolving does not support the safety of E Cigarettes.

“Electronic cigarettes, marketed as safer than regular cigarettes, deliver a cocktail of toxic chemicals including carcinogens into the lungs. Using e-cigarettes may even make bacterial infections resistant to antibiotics, according to one study. Few studies have looked at the toxicity of their vapors. As a result, scientists have been circumspect about describing e-cigarettes as safe. E-cigarettes deliver high levels of nanoparticles, researchers found, which can trigger inflammation and have been linked to asthma, stroke, heart disease, and diabetes.”

“E-cigarettes are no longer niche products, he and others note. Vaping product sales last year were projected to hit an estimated \$1.7 billion, Li-Lun Chen and Corinne Husten of the Food and Drug Administration’s Center for Tobacco Products in Rockville, Md., in a special May issue of Tobacco Control on e-cigarettes. E-cigarette sales may exceed those of traditional cigarettes within 10 years, the pair reports. At least 1 in 5 smokers has tried e-cigarettes, as have 10 percent of U.S. high school students, according to the U.S. Centers for Disease Control and Prevention. Those people may think vaping is safe, but FDA has seen no data establishing anything like that. Callahan- Lyon reviewed data from 18 studies on e-cigarettes’ vapors and found that most contain at least traces of the solvents in which nicotine and flavorings had been dissolved. Those solvents are known as lung irritants. And the solvents can transform into something even more worrisome: carbonyls. This group includes known cancer-causing chemicals, such as formaldehyde, and suspected carcinogens, such as acetaldehyde. Because early e-cigarettes didn’t deliver the same powerful hit of nicotine that burning tobacco does, engineers developed second-generation technology that allows users to increase an e-cigarette’s voltage, and thus temperature, to atomize more nicotine per puff. But the higher temperatures also can trigger a thermal breakdown of the solvents, producing the carbonyls. (Goniewicz of the Roswell Park Cancer Institute in Buffalo, N.Y.) If users of second-generation e-cigarettes maximize the power on their devices while using vaping liquids containing a solvent mix of glycerin and propylene glycol,

formaldehyde levels can reach that found in tobacco smoke (Nicotine & Tobacco Research).

Thornburg found the mass of particles in the vapors is about 3 milligrams per cubic meter of air, he says, or about 100 times as high as the Environmental Protection Agency's 24-hour exposure limit for levels of fine air particles. Thornburg's group's analyses predict that some 40 percent of these inhaled particles would deposit in the lungs' smallest, deepest airways. In addition to nicotine and solvents, vapors also contain chemical flavorings and food preservatives from the vaping liquid. "No one has considered their safety when it comes to inhalation," and e-cigarette vapors can even make dangerous germs harder to kill, (American Thoracic Society). A pulmonary and critical care physician and scientist with the VA San Diego Healthcare System, she exposed methicillin-resistant Staphylococcus aureus, better known as MRSA, to e-cigarette vapors. In a lab dish, these antibiotic-resistant bacteria, which can cause pneumonia, proved harder to kill using a germ-killing protein fragment — a natural antibiotic that people's bodies make. One reason: Germs exposed to nicotine-rich vapors secreted a thicker biofilm coating that protected them.

We urge the Committee to support **PROPOSED BILL NO. 5219 AN ACT PROHIBITING THE USE OF ELECTRONIC CIGARETTES IN SCHOOLS.**

Thank you for your consideration of this legislation.

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